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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/910,927	07/24/2001	Felix Henry	1807.1618	3539

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EXAMINER

LAROSE, COLIN M

ART UNIT	PAPER NUMBER
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2624

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

09/910,927

Applicant(s)

HENRY ET AL.

Examiner

Colin M. LaRose

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Arguments and Amendments

1. Applicant's arguments and/or amendments dated 31 January 2007, have been entered and made of record.

Response to Amendments and Arguments

2. Applicant has amended independent claims 1 and 7 to denote that the region of interest is coded by "a predetermined number of bitplanes" and that the detection of the end of decoding the region of interest is accomplished by checking "whether the predetermined number of bitplanes has been received." Applicant asserts that nothing in Dekel, Myers, or Christopoulos, taken separately or in combination, would teach displaying an indicator of the end of decoding of a region of interest "based on checking whether a predetermined number of bitplanes defining this region of interest have been received" (see Remarks, p. 9). Examiner respectfully disagrees.

Examiner has previously pointed to block 1601, figure 16 of Dekel as teaching the limitation of detecting an end of decoding of an ROI based on the number of received bitplanes. As shown in block 1601, it is determined whether there are any remaining bitplanes to be decoded—if there are none, then decoding is stopped, as shown in block 1605. Since Dekel's decoding of the bitplanes commences at a given bitplane—i.e. "maxBitplane" (column 13/35-40)—the decision executed in block 1601 determines whether the predetermined "maxBitplane" number of bitplanes has been received/decoded. When the "maxBitplane" number of bitplanes has been decoded, then the end of decoding is detected.

Accordingly, the previous rejections have been maintained.

Claim Rejections - 35 USC § 101

3. In view of Applicant's amendments to claims 16-20, the previous § 101 rejections thereof have been withdrawn.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 5-9, and 11-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,452 by Dekel et al. ("Dekel") in view of "The Importance of Percent-Done Progress Indicators for Computer-Human Interfaces" by Myers and U.S. Patent Application Publication 2004/0234141 by Christopoulos et al. ("Christopoulos").

Dekel discloses an image transmission system where a user at a client computer can request an image to be delivered from a server. Before or during transmission of the image, the

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user can request a region of interest (ROI) within the image to be delivered. The server receives and processes the user's request for an ROI in real time and then transmits the ROI data to the client progressively. Upon receipt, the client performs progressive decoding and displaying of the ROI data. See figure 2.

Regarding claims 1, 7, 17, 18, and 20, Dekel discloses a method/device (*figures 1 and 16*) for alerting during the progressive decoding of a digital image coded by bitplanes with a region of interest (ROI) coded by a predetermined number of bitplanes to be decoded first, comprising the steps of:

detecting an end of decoding of the region of interest by checking whether the predetermined number of bitplanes has been received (*block 1601 detects an end to the decoding of an ROI based on whether the predetermined "maxBitplane" number of bitplanes has been received and decoded—see column 13/35-40*); and

activating of an indication of the end of decoding of the said region of interest (*block 1605: if an end to the decoding of the ROI is detected, then a command is issued to the client to "stop decoding" -- i.e. the process block 1605 activates an indication to the client computer that decoding should cease*).

Dekel does not disclose that the indication is activated "by displaying an indicator in an indicator-display area at a predetermined position on a screen," as claimed. Rather, Dekel only appears to disclose providing an indication to the client computer that is internal to the computer-implemented method of figure 16 and is not displayed to a user.

Myers discloses the desirability of displaying a progress indicator to a user while a computer is processing a given task. "Percent-done progress indicators are a technique for

graphically showing how much of a long task has been completed,” and they “give the user enough information at a quick glance to estimate how much of the task has been completed and when the task will be finished” (column 2, page 11). Myers teaches that virtually any computer process that takes time to complete would benefit from displaying a progress indicator to a user – e.g. file transfers, program loading, compilation, text processing, etc. (column 2, page 12). In particular, progress indicators such as shown in figures 1-4 inform a user of the beginning and ends of a process as well as the progress thereof.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Dekel by Myers to display a progress indicator at a predetermined position on a screen in order to inform the user of the end of decoding of an ROI since Dekel discloses a data transfer process (figure 2) that involves transmitting, decoding, and displaying a user-specified ROI, and Myers teaches that, for computer processes such as file transfers and the like, it is preferable to provide the user with a displayed indication of the progress of the process so that the user is informed of the overall duration and remaining time required to execute the process (see e.g. column 1, page 13: “people ... prefer to have progress indicators”). Such a displayed indication would prevent user frustration and the like caused by not knowing how long a certain computer process takes or when the process will end.

Also, Dekel does not appear to disclose the coded image [includes] “at least a bitplane to be decoded last corresponding to data not belonging to the region of interest,” as claimed. Dekel does not disclose such a limitation because Dekel performs encoding only on the ROI and ignores other areas of the image not belonging to the ROI, such as the background.

Christopoulos, like Dekel, discloses a modification of the JPEG standard whereby a user can select a ROI, which is then both coded and transmitted separately from other regions. In paragraphs [0099] and [0100], Christopoulos teaches a method for encoding, transmitting, and decoding ROIs in such a manner. Essentially, prior to encoding, the ROI coefficients are "shifted or multiplied" by a certain number so that all of "the smallest ROI coefficient is larger than the largest background coefficient." As a result, all of the bitplanes corresponding to the ROI are coded and transmitted prior to any of the background coefficients being coded and transmitted. The ROI "will be reconstructed completely" at the decoder before any of the background is decoded and rendered.

Dekel's system teaches coding, transmitting, and decoding only the ROI, and not the background area, presumably because fast rendering for the ROI is desired, and the background area is deemed to be so unimportant that it can be neglected. Christopoulos, however, recognizes that a user may want to view the background in addition to the ROI, and provides an improvement upon Dekel whereby the bitplanes of the background area are coded and rendered after the coding and rendering of the ROI.

Such a modification to Dekel would have been obvious in view of Christopoulos' teaching that when an ROI is to be progressively encoded and decoded by bitplanes, it is desirable to progressively encode and decode the background afterwards in case the user wishes to view the background surrounding the ROI. In other words, such a modification to Dekel would cause "at least a bitplane to be decoded last corresponding to data not belonging to the region of interest." In addition, such a modification would not destroy the principle operation of Dekel's system,

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since the bitplanes of the background area are encoded only after all the bitplanes of the ROI are encoded and transmitted.

Further regarding claims 17, 18, and 20, Dekel does not expressly disclose that the storage medium, such as a floppy disk or CD-ROM, is detachably mountable on a device according to claim 7 or 8, however, at the time of the invention, using floppy disks and CD-ROM disks to store computer programs as a detachably mountable storage medium was a conventional practice and would have been an obvious expedient to those skilled in the art.

Official Notice taken.

Further regarding claim 20, the combination of Dekel and Myers discloses the method/device according to claims 1 and 16, further comprising steps/means for:

activation of an indication of the start of decoding of the said region of interest, and

activation of an indication of the progress of the decoding of the said region of interest

(i.e. Myers' progress indicators indicate both the start, progress, and end of a given process).

Regarding claims 2 and 8, the combination of Dekel and Myers discloses the method/device according to claims 1 and 7, further comprising steps/means for:

activation of an indication of the start of decoding of the said region of interest, and

activation of an indication of the progress of the decoding of the said region of interest

(i.e. Myers' progress indicators indicate both the start, progress, and end of a given process).

Regarding claims 3 and 9, the combination of Dekel and Myers discloses a method/device according to claims 1 and 7, further comprising steps/means for:

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activating an indication of decoding of the coded data of the image which are not in the region of interest, and

activating an indication of the end of decoding of the coded data of the image which are not in the said region of interest (*i.e. when a user requests a new region of interest, e.g. corresponding to image data that is not in the old ROI (Dekel, col. 5/16-21), it would likewise have been obvious to activate indications of the progress and end of the decoding of the new ROI based on Myers's teachings, as explained above for claims 1 and 7).*

Regarding claims 5 and 11, the combination of Dekel and Myers teaches a data receiving method/device incorporating the alerting method according to claim 1 and 7 (*client computer 110, figure 1 of Dekel*).

Regarding claims 6 and 12, the combination of Dekel and Myers teaches a method/device for progressive decoding of a digital image coded with a region of interest, incorporating the alerting method/device according to claims 1 and 7 (*client computer 110, figure 1 of Dekel*).

Regarding claim 13, Dekel discloses a device according to claim 7 or 8 characterised in that the detection and activation means are incorporated into:

a microprocessor (*col. 4/3-6: client computer 110 has microprocessor*);

a read-only memory (*i.e. ROM embodied in client computer 110, figure 1*) including a program for processing the data, and

a random-access memory (*i.e. RAM embodied in client computer 110, figure 1*) including registers suitable for registering variables modified in the course of the running of the said program.

Regarding claim 14, the combination of Dekel and Myers teaches an apparatus for processing a digital image, including means suitable for implementing the method according to claim 1 or 2 (*client computer 110, figure 1 of Dekel*).

Regarding claim 15, the combination of Dekel and Myers teaches an apparatus for processing a digital image, including the device according to claim 7 or 8 (*client computer 110, figure 1 of Dekel*).

Regarding claim 16, the combination of Dekel and Myers teaches a storage medium storing a program for alerting during the progressive decoding of a digital image coded with a region of interest according to claim 1 (*client computer 110, figure 1 of Dekel, stores a computer program for performing the alerting*).

Regarding claim 19, Dekel discloses a storage program on a storage medium and comprising computer executable instructions for causing a computer to alert during the progressive decoding of a digital image coded with a region of interest according to claim 1 or 2 (*i.e. Dekel discloses implementing the method in a computer, which necessarily executes programmed instructions*).

6. Claims 4 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,314,452 by Dekel et al. ("Dekel") in view of "The Importance of Percent-Done Progress Indicators for Computer-Human Interfaces" by Myers and U.S. Patent Application Publication 2004/0234141 by Christopoulos et al. ("Christopoulos"), as applied to claims 1 and 7, and further in view of U.S. Patent 5,436,637 by Gayraud et al. ("Gayraud").

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Regarding claims 4 and 10, Myers discloses providing the displayed indication in a window on the screen (figure 3), however, Myers does not appear to disclose that the position of the indicator-display area is alterable by a user.

Gayraud discloses that conventionally, graphical user interfaces employ windows. Gayraud further discloses that such windows are alterable by a user. That is, the user may change the size, position, shape, etc. of the window according to individual preferences. See column 1, lines 49-63. In view of this teaching, it would have been obvious to those skilled in the art at the time of the invention that Myers's window containing a progress indicator (i.e. figure 3) was alterable by a user, and that a user could change the position of the window and thus the progress indicator at will, based on personal preference or the like.

Conclusion


7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000. Any inquiry of a general nature or relating to the status of this application or proceeding can also be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.


Colin M. LaRose
Group Art Unit 2624
22 February 2007